



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/634,585   | 08/05/2003  | Randal T. Beste      | 1391-43700          | 6997             |
| 46133  | 7590        | 03/22/2005           | EXAMINER            |                  |
| CONLEY ROSE, P.C.<br>PO BOX 3267<br>HOUSTON, TX 77253-3267 |             |                      |                     | LEDYNH, BOT L    |
|  |             | ART UNIT             |                     | PAPER NUMBER     |
|  |             |                      |                     | 2862             |

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                         |
|------------------------------|-------------------------------|-------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>        | <b>Applicant(s)</b>     |
|                              | 10/634,585                    | BESTE ET AL.            |
|                              | <b>Examiner</b><br>Bot LeDynh | <b>Art Unit</b><br>2862 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 17 February 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-41 is/are pending in the application.  
4a) Of the above claim(s) 27,28 and 32-41 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-11,14,17-21,24 and 29-31 is/are rejected.  
7)  Claim(s) 12,13,15,16,22,23,25 and 26 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
Bot Ledynh  
Primary Examiner

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/5/03

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## DETAILED ACTION

Applicant's election with traverse with respect to claims 30-31 in the reply filed on 02/03/05 is acknowledged. For the time being, the Examiner agrees to examine claims 30-31 in addition to the elected group I.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9-10, and 17-20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Thompson et al (6646441). Thompson et al (6646441) discloses the same invention as claimed : A method comprising: operating a logging tool in a borehole, the logging tool having a transmitting antenna; transmitting from the transmitting antenna an electromagnetic wave having a first frequency, a second frequency and a third frequency (see col.6, lines 32-67). For the logging tool, see Fig.1. Also see Background of the Art.

Claims 29-31 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Moore (20040217763). Moore (20040217763)discloses the same invention as claimed : logging collar 110 including 2 transmitters and 2 receivers (paragraph 0032); tuning network (capacitors and inductors) providing simultaneous series tuning at three

interrogation frequencies (paragraph 0052); with simultaneous series tuning at three interrogation frequencies, Moore discloses the invention: the antennas operate at three frequencies at the same time; therefore, the device transmits an electromagnetic wave having a first frequency from an antenna; and tunes a second antenna to resonate at a second frequency during (i.e., simultaneous transmission) transmitting by the first antenna, the second frequency (one of the three frequencies) different than the first frequency (one of the other two). Although specific columns, figures, reference numerals, lines of the reference(s), etc. have been referred to, Applicant should consider the entire applied prior art reference(s).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 11, 14, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al (6646441) as applied to claim 1, 9-10 above, and further in view of Prammer et al. (6268726). Thompson et al discloses substantially the same invention as claimed, except for tuning by controlling the capacitance coupled to the transmitters, and sending control signals for the relays. Prammer et al discloses that tuning capacitors and sending control signals for the relays are used to add more tuning

capacitors to the resonant circuit formed by the fixed capacitors and the antenna (col. 18, lines 12-56). It would have been obvious to one of skill in the art to modified Thompson et al by tuning capacitors and sending control signals for the relays in order to add more tuning capacitors to the resonant circuit formed by the fixed capacitors and the antenna, and to tune the antennas for a particular frequency. Although specific columns, figures, reference numerals, lines of the reference(s), etc. have been referred to, Applicant should consider the entire applied prior art reference(s).

Claims 2-8, 11, 14, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al (6646441) as applied to claim 1, 9-10 above, and further in view of Nichols (6294917). Thompson et al discloses substantially the same invention as claimed, except for tuning by controlling the capacitance and inductance coupled to the transmitters, and sending control signals for the relays. Nichols discloses that relays are used to switch capacitors and inductors in and out of in order to tune the frequencies (see col. 7, lines 20-50). It would have been obvious to one of skill in the art to modified Thompson et al by tuning capacitors and inductors, and sending control signals for the relays in order to tune the antennas for a particular frequency (by controlling inductance and capacitance). Although specific columns, figures, reference numerals, lines of the reference(s), etc. have been referred to, Applicant should consider the entire applied prior art reference(s).

17-20

Claims 12-13, 15-16, 22-23 and 25-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bot LeDynh whose telephone number is 5712722231. The examiner can normally be reached on Maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 5712722180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BL/ 2005



Bot LeDynh, J.D., Ph.D., D.A.  
Primary Examiner